

**VERSION SHOWING MARKED UP CHANGES TO  
PRELIMINARY AMENDMENT FILED JUNE 28, 2001**

1. (Amended) A process for preparing a nanocomposite based on magnesium and at least one or several other elements or compounds known to absorb hydrogen and to be very few miscible with magnesium or its hydride during grinding, characterized in that it comprises:

- a) subjecting magnesium or a magnesium-based compound known to absorb hydrogen, to a hydrogenation in order to obtain the corresponding hydride in the form of a powder;
- b) mixing the so-obtained hydride powder with the other element(s) or compound(s) or with a hydride of said other element(s) or compound(s);
- c) subjecting the so-obtained mixture to an intensive mechanical grinding in order to obtain the corresponding nanocomposite in the form of a hydride; and, if required,
- d) subjecting the nanocomposite obtained in step c) to a hydrogen desorption, with the proviso that said other element(s) or compound(s) or their hydride(s) is not Mg<sub>2</sub>NiH<sub>4</sub>.

8. (Twice amended) The process according to claim 1, characterized in that in step b), use is made of another compound and said at least one other compound is selected from the group consisting of LaNi<sub>5</sub>, MnNi<sub>5</sub>, [MmNi<sub>5</sub>], ZrMn<sub>2</sub>, ZrV<sub>2</sub>, TiMn<sub>2</sub>, MgNi and their hydrides except Mg<sub>2</sub>NiH<sub>4</sub>, the solid solution of the formula V<sub>1-y</sub>T<sub>y</sub> where y ranges from 0 to 1, (V<sub>0.9</sub>Ti<sub>0.1</sub>)<sub>0.95</sub>Fe<sub>0.05</sub> and the amorphous alloys of Mg-Ti.